


Claims

- Sub-1
1. Electrochromic element with an electrochromic arrangement enclosed between two plane substrates, which comprises at least two electrode layers, one electrochromic layer, one ion storage layer, and one polymer electrolyte layer formed in situ, where the polymer electrolyte layer adjoins a sealing element at the edge of the electrochromic element.

characterized in that

the sealing element consists of a plastically deformable liquid impermeable adhesive strip (8) of a polyacrylate, arranged between the two plane substrates (1, 2) and adjoining directly the polymer electrolyte layer (7), as well as of a sealing strand (9) adjacent thereto on the outside, consisting of a gas impermeable sealant chemically compatible with the adhesive strip (8).

2. Electrochromic element in accordance with Claim 1, **characterized in that** the adhesive strip (8) is formed of a polyacrylate tape.
3. Electrochromic element in accordance with Claim 1 or 2, **characterized in that** the adhesive strip (8) possesses a width of at least 5 mm.
4. Electrochromic element in accordance with Claim 3, **characterized in that** the adhesive strip(8) possesses a maximum width of 20 mm.
5. Electrochromic element in accordance with one of the foregoing claims, **characterized in that** the adhesive strip(8) consists of a polyacrylate with a maximum water content of 0.3 weight percent, preferably less than 0.05 weight percent.
6. Electrochromic element in accordance with one of the foregoing claims, **characterized in that** the adhesive strip (8) consists of a polyacrylate with a glass transition temperature below 10°C.

- 
7. Electrochromic element in accordance with one of the foregoing claims, **characterized in that** the sealing strand (9) consists of a polyisobutylene or butyl rubber based butyl sealant.
 8. Electrochromic element in accordance with Claim 7, **characterized by the fact that** the sealing strand (9) possesses a specific conductivity of less than $10^{-9} \Omega^{-1}\text{cm}^{-1}$, preferably less than $10^{-11} \Omega^{-1}\text{cm}^{-1}$ and a water vapour permeability according to DIN 53122-1.2 of less than $0.5 \text{ g}\cdot\text{m}^{-2}\cdot\text{d}^{-1}$.
 9. Electrochromic element in accordance with one of Claims 1 to 6, **characterized in that** the sealing strand (9) consists of an epoxy sealant.
 10. Electrochromic element in accordance with Claim 9, **characterized in that** the sealing strand (9) possesses a specific conductivity of less than $10^{-12} \Omega^{-1}\text{cm}^{-1}$, preferably less than $10^{-13} \Omega^{-1}\text{cm}^{-1}$ and a water vapour permeability according to DIN 53122-1.2 of less than $4.0 \text{ g}\cdot\text{m}^{-2}\cdot\text{d}^{-1}$.
 11. Electrochromic element in accordance with one of the foregoing claims, **characterized in that** sealing strand (9) is adjoined by at least one further sealant strand (10), in particular one with polysulfide base.
 12. Electrochromic element in accordance with one of the foregoing claims, **characterized in that** the polymer electrolyte layer (7) comprises at least one (meth)acrylic ester, at least one plasticizer and at least one polymerization initiator.